

What is Claimed is:

1. A method for the metered administration of one or more therapeutically effective gases to a patient, comprising a step to remove harmful or undesired substances from the gas-carrying system or from parts of the gas-carrying system, **characterized in that** the step consists of purging with one or more other gases or gas mixtures and/or it consists of evacuation.
2. The method according to Claim 1, **characterized** by the following therapeutically effective gases: NO, CO or CO₂ mixtures used to stimulate breathing, H₂ mixtures, N₂O mixtures, SF₆ mixtures, nitrosoethanol, anesthetic gases.
3. The method according to Claim 2, **characterized in that** the other gas is selected from the group consisting of air, O₂, N₂, Ar, Xe, He, SF₆, an anesthetic gas, mixtures thereof and other gases which do or do not have a therapeutic effect.
4. The method according to Claim 3, **characterized in that** the purging or evacuation step is one of time-controlled, sensor-controlled and event-controlled.
5. The method according to Claim 4, **characterized in that** the parts of the system to be cleared comprise feed lines, valves, tubing, dead spaces, and patient intake elements.

6. The method according to Claim 5, characterized in that the patient intake elements are selected from the group consisting of nosepieces and masks.
7. The method according to Claim 1, **characterized in that** the other gas is selected from the group consisting of air, O₂, N₂, Ar, Xe, He, SF₆, an anesthetic gas, mixtures thereof and other gases which do or do not have a therapeutic effect.
8. The method according to Claim 1, **characterized in that** the purging or evacuation step is one of time-controlled, sensor-controlled and event-controlled.
9. The method according to Claim 1, **characterized in that** the parts of the system to be cleared comprise feed lines, valves, tubing, dead spaces, and patient intake elements.
10. A device for the metered administration of one or more therapeutically effective gases to a patient, comprising a device to remove harmful or undesired substances, **characterized** by one of a second gas line and an evacuation line in addition to a first gas line.
11. The device according to Claim 10, **characterized in that** the first gas line includes a pressure gauge, a flowmeter and a gas valve and in that the second line likewise includes a pressure gauge, a flowmeter and a valve.

12. The device according to Claim 10, **characterized in that** the second gas line is a compressed-air connection.
13. The device according to Claim 12, **characterized in that** the evacuation line comprises one of an evacuation unit and a connection to an existing evacuation line.
14. The device according to Claim 11, **characterized in that** the evacuation line comprises one of an evacuation unit and a connection to an existing evacuation line.
15. The device according to Claim 10, **characterized in that** the evacuation line comprises one of an evacuation unit and a connection to an existing evacuation line.

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